

Title (en)

Optical amplifier for wide band raman amplification of wavelength division multiplexed (WDM) signal lights

Title (de)

Optischer Verstärker für breitbandige optische Ramanverstärkung eines wellenlängenmultiplexierten Signallichts

Title (fr)

Amplificateur optique d'amplification optique Raman à large bande pour signal lumineux à multiplexage en longueurs d'ondes

Publication

EP 1187276 A3 20050713 (EN)

Application

EP 01119758 A 20010828

Priority

JP 2000262080 A 20000831

Abstract (en)

[origin: EP1187276A2] A Raman amplifier providing a wideband gain for use in a wavelength division multiplexing (WDM) optical communication system. In one embodiment, a first optical amplifier Raman amplifies a wavelength division multiplexed signal light in both a first wavelength band and a second wavelength band in accordance with a plurality of excitation lights provided to the first optical amplifier, the first and second wavelength bands being different from each other. A divider divides the amplified signal light into first and second lights in the first and second wavelength bands, respectively. A second optical amplifier amplifies the first light and has a gain band in the first wavelength band. The third optical amplifier amplifies the second light and has a gain in the second wavelength band. In various embodiments, a gain equalizer and/or an optical isolator is used in combination with the first optical amplifier providing the Raman amplification. A controller is also provided to control the excitation lights provided to the first optical amplifier to achieve specific effects. <IMAGE>

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H01S 3/30; **H04B 10/17**; **G02F 1/35**

IPC 8 full level

G02F 1/35 (2006.01); **H01S 3/06** (2006.01); **H01S 3/067** (2006.01); **H01S 3/10** (2006.01); **H01S 3/131** (2006.01); **H01S 3/30** (2006.01); **H04B 10/07** (2013.01); **H04B 10/29** (2013.01); **H04B 10/294** (2013.01); **H04J 14/00** (2006.01); **H04J 14/02** (2006.01); **H01S 3/0941** (2006.01); **H01S 5/14** (2006.01)

CPC (source: EP US)

H01S 3/06754 (2013.01 - EP); **H01S 3/302** (2013.01 - EP US); **H04B 10/2916** (2013.01 - EP US); **H04B 10/2942** (2013.01 - EP US); **H01S 3/06758** (2013.01 - EP US); **H01S 3/0941** (2013.01 - EP US); **H01S 5/146** (2013.01 - EP US); **H01S 2301/06** (2013.01 - EP US)

Citation (search report)

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